Audit

Report

SHARING YEAR 2000 TESTING INFORMATION ON DOD
INFORMATION TECHNOLOGY SYSTEMS

Report No. 98-074   February 12,1998

Office of the Inspector General
Department of Defense

Acronym

Y2K   Year **2000**

February 12, 1998

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (COMMAND,
CONTROL, COMMUNICATIONS, AND INTELLIGENCE)

SUBJECT: Audit Report on Sharing Year 2000 Testing Information on DoD Information
Technology Systems (Report No. 98-074)

We are providing this audit report for review and comment. We considered
management comments on a draft of this report in preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly.
The Office of the Assistant Secretary of Defense (Command, Control, Communications,
and Intelligence) comments were responsive. Based on management comments, we added
Recommendations 2. and 3. and we request additional comments on them by April 10,
1998.

We appreciate the courtesies extended to the audit staff. Questions on the audit
should be directed to Ms. Mary Lu Ugone, Audit Program Director, at (703) 604-9049
(DSN 664-9049) or Ms. Virginia Rogers, Audit Project Manager, at (703) 604-9041
(DSN 664-9041). See Appendix C for the report distribution. The audit team members
are listed inside the back cover.

Robert J.'Lieberman
Assistant Inspector General
for Auditing

Report No. 98-074   **February 12, 1998**
(Project No. SAS-0004)

Sharing Year 2000 Testing Information on
DoD Information Technology Systems

Executive Summary

Introduction. The year 2000 problem is the term most often used to describe the potential failure of information technology systems to process or perform date-related functions before, on, or after the turn of the next century.

This is one of a series of reports being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the year 2000 computing challenge.

Audit Objectives. The audit objective was to determine whether planning for year 2000 testing is adequate to ensure that mission-critical DoD information technology systems will continue to operate properly after the year 2000. Specifically, the audit focused on year 2000 management guidance and testing resources.

Audit Results. The DoD has designated the use of homepages on the Internet as the primary means of sharing year 2000 related information, and DoD Components have made progress in establishing year 2000 information on their respective homepages. However, the process for sharing year 2000 testing information can be more effective. DoD Components may be expending time-sensitive resources inefficiently in solving the year 2000 problem through the duplication of efforts and in attempting to locate accurate testing information. The ability to retrieve and use all appropriate testing information in a timely and efficient manner will be instrumental in the solution of the year 2000 problem. See Part I for details of the audit results.

Summary of Recommendations. We recommend establishing within DoD a DOD-sponsored year 2000 testing information center for collecting, analyzing, storing, and disseminating year 2000 related testing information. We also recommend providing year 2000 hotline services to the DoD Components. Further, we recommend that DoD Components be notified of the testing center's year 2000 role and responsibilities and of the Components' responsibility to share testing information, Additionally, we recommend that DoD internet homepages be organized to enable users to quickly and easily access the center for year 2000 testing information.

Management Comments. The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) concurred with the draft recommendations, stating that

the office had already directed the Joint Interoperability Test Command to maintain a homepage that addresses year 2000 testing information for all of DoD. See Part I for a summary of management comments and Part III for the complete text of the comments.

Audit Response. Although we consider management comments to be responsive to the draft recommendations, our intent was to establish a DOD-sponsored year 2000 testing information center, recognized by the other DoD Components, to organize and provide links to the year 2000 testing information provided on the internet by the DoD Components. Accordingly, we added recommendations to clarify the actions needed to sufficiently identify, publicize, and access sources of year 2000 testing information. We request that the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) provide comments on the final report by April 10, 1998.

Table of Contents

Part I - Audit Results

Audit Background

The year 2000 (Y2K) problem is the term most often used to describe the potential failure of information technology systems to process or perform date-related functions before, on, or after the turn of the century. The Y2K problem is rooted in the way dates are recorded and computed in automated information systems. For the past several decades, systems have typically used two digits to represent the year, such as "97" representing 1997, to conserve electronic data storage and to reduce operating costs. With the two-digit format, however, the year 2000 is indistinguishable from 1900, or 2001 from 1901, and so forth. As a result of the ambiguity, system or application programs that use dates to perform calculations, comparisons, or sorting could generate incorrect results when working with years following 1999. Calculation of Y2K dates is further complicated because the year 2000 is a leap year, the first century leap year since 1600. The computer systems and applications must recognize February 29, 2000, as a valid date. Because of the potential failure of computers to run or function throughout the Government, the General Accounting Office has designated resolution of the Y2K problem as a high-risk program.

As of November 1997, DoD reported 3,143[1] mission-critical systems' to the Office of Management and Budget. The total cost of the DoD Y2K effort was estimated at about $1.5 billion.

DoD Year 2000 Management Plan. The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) issued the "DoD Year 2000 Management Plan" (Management Plan) in April 1997. The Management Plan provides the overall DoD strategy and guidance for inventorying systems, prioritizing systems, retiring systems, and monitoring progress. The Management Plan states that the DoD Chief Information Officer has overall responsibility for overseeing the DoD solution to the Y2K problem. Also, the Management Plan makes the DoD Components responsible for the five-phase Y2K management process, including awareness, assessments, renovations, validations, and implementation actions. The Management Plan includes a description of the five-phase Y2K management process and designates the Defense Integration Support Tools database as the official repository of data on DoD Component information technology systems.

'The draft version of this report showed 2,197 mission-critical systems as of November 1997 because it did not include intelligence systems.

*When a mission-critical system's capabilities are degraded, the organization realizes a resulting loss of a core capability.

The DoD Five-Phase Management Process. Each of the five phases is supported by program and project management and represents a major Y2K program activity or segment. The April 1997 Management Plan shows the following target completion dates for the five phases ranging from December 1996 through November 1, 1999.

- Phase I - Awareness. Awareness, education, and initial organization and planning take place. Target completion date: December 1996.

- Phase II - Assessment. Scope of Y2K effects is identified, and system-level analysis takes place. Target completion date: June 1997.

- Phase III - Renovation. Required system renovations are accomplished. Target completion date: December 1998.

- Phase IV - Validation. Systems are certified as Y2K compliant as a result of various testing and compliance processes. Target completion date: January 1999.

- Phase V - Implementation. Systems are fully operational after being certified in Phase IV. Target completion date: November 1, 1999.

The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) is in the process of issuing an updated Management Plan, which accelerates the target completion dates for the Renovation, Validation, and Implementation phases.

Defense Integration Support Tools Database. The Defense Integration Support Tools database, maintained by the Defense Information Systems Agency, contains the official DoD inventory of DoD Component information technology systems. The database contains information on hardware platforms, operating systems, applications languages, communications, and interfaces. Originally designed to support the planning and execution of the DoD automated information system migration strategy,[3] the Management Plan states that DoD Components should use the Defense Integration Support Tools database to track Y2K compliance and to support management decisions.

Audit Objectives

The overall audit objective was to determine whether planning for Y2K testing is adequate to ensure that mission-critical DoD information technology systems

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[3]The strategy related to existing or planned and approved automated information systems that have been officially designated as the automated information system to support standard functional processes.

will continue to operate properly after the Y2K. Specifically, the audit focused on Y2K management guidance and testing resources. See Appendix A for a discussion of the audit scope and methodology.

Sharing Year 2000 Testing Information on DoD Information Technology Systems

The DoD has designated the use of homepages on the Internet as the primary means of sharing Y2K related information, and DoD Components have made progress in establishing Y2K information on their respective homepages. However, the process for sharing Y2K testing information can be more effective.

Sharing of testing information is not as effective as possible because the DoD decentralized strategy for collecting, storing, and distributing Y2K testing-related information is inadequate. Further, the testing information available on the Internet is not in an organized format.

As a result, DoD may be expending time-sensitive resources inefficiently in solving the Y2K problem through the duplication of efforts and in attempting to locate accurate testing information. The ability to retrieve and use all appropriate testing information in a timely and efficient manner will be instrumental in the solution of the Y2K problem.

DoD Policy on Coordinating Year 2000 Information

DoD policy for resolving the Y2K problem, as stated in the Management Plan, assigns the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence), who is also the DoD Chief Information Officer, with the overall responsibility for overseeing the DoD solution to the Y2K problem and assigns the DoD Components with the responsibility for implementation. The Management Plan states that the policy allows DoD Components the flexibility to implement solutions as deemed appropriate while benefiting from best practices in a coordinated effort.

To reduce duplication of effort and to leverage Y2K experiences, the Management Plan states that information on Y2K problems, best practices, and lessons learned will be shared among the DoD Components and with Government agencies and the private sector. The primary sharing media for this effort are the Y2K public and restricted homepages on the Internet.

Year 2000 Information Available on the Internet

The Y2K testing information shared on the Internet is tailored for individual DoD Component requirements and is not organized for implementing Y2K solutions from an overall DoD perspective. Additionally, it is difficult for DoD Component personnel to locate relevant and accurate Y2K test-related information.

DoD Homepage. The DoD homepage, DefenseLINK, does not contain a direct link (connection from one Internet site to another) to issues related to the Y2K problem. DefenseLINK, the World Wide Web Information Service from DoD, contains links to the Secretary of Defense, Joint Chiefs of Staff, the National Guard, the Army, the Navy, the Air Force, the Marine Corps, other organizations, and other information. Using the search capability of the DefenseLINK homepage, we searched for "Y2K" (the commonly used acronym for year 2000) and "year 2000." Only the "year 2000" search yielded a total of 61 references of which 1, "Raising Awareness of the Year 2000 Computer Problem," pertained to the DoD Y2K program.

The first reference to the DoD Y2K program, starting from the DoD homepage, is found on the homepage for the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence). From that homepage, selecting "Year 2000 Program" provides a link to the Defense Information Systems Agency Y2K homepage which, in turn, provides links to the Army, Navy, Air Force, Marine Corps, and Defense Logistics Agency Y2K homepages.

DoD Component Year 2000 Homepages. While the Y2K homepages of the Army, the Navy, the Air Force, and the Defense Information Systems Agency contain a wide variety of Y2K-related information, the information is difficult to find, requiring extensive searches through multiple layers of linked homepages. Additionally, none of the Y2K homepages has a search capability focused on Y2K test information; therefore, DoD Components have to search through multiple layers of linked homepages to find needed information. The DoD Component homepages also do not provide an index of information available on a particular site to assist in locating specific information. Finally, the Components' homepages do not provide information on hotline-type services for Y2K problems. While telephone and electronic mail services are normally provided on a homepage, those services are not provided by a centralized facility to use technical expertise or emergency assistance on a DoD-wide basis.

General Internet Search. As we near the turn of the century, the amount of Y2K testing-related information on the Internet will increase dramatically. The addition of testing information in an unorganized format to the Internet will further complicate the ability to locate information. Our search of the Internet for selected year 2000 terms yielded the following.

**Internet Search Results on Year
2000 Information**

Term	Matches
year 2000	262,176
Y2K	12,437
year 2000 compliance	7,275
Y2K compliance	1,160
year 2000 testing	1,542
Y2K testing	312

While the sheer volume of data precludes a detailed analysis, the relatively small number of matches for Y2K testing-related information ("year 2000 testing" and "Y2K testing") suggests that most of the data pertain to Y2K awareness and assessment topics. More awareness and assessment information than testing information may be available because DoD and other Federal agencies are just moving into the renovation and validation phases of the Y2K management process.

Importance of the Validation Phase

The validation phase is the most critical of the DoD Y2K five-phase process because during that phase, systems are tested to verify that they will operate correctly into the next century. If, as stated in the Management Plan, DoD plans to leverage Y2K experiences, DoD management will have to make substantive changes to the strategy of centralized policy and decentralized implementation. Specifically, changes are required in the ways that Y2K testing-related information is collected, stored, and distributed on a DoD-wide basis. The DoD Components should provide the necessary information on the Internet in an easily accessible format.

Best Practices and Lessons Learned. The Management Plan states that information on best practices and lessons learned will be shared on Internet homepages to reduce the duplication of effort and to leverage Y2K experience. However, we located 1 site for best practices and 10 sites for lessons learned, which is very few considering the vast number of systems, personal computers, and software used by the Services and the Defense Information Systems Agency. The only site we found that referenced best practices was the Social Security Administration Best Practices. Although the sites were not specifically named "lessons learned," the Navy Y2K homepage included links to three sites

that described lessons learned from testing. The Defense Information Systems Agency Y2K homepage contained a link to seven sites that described lessons learned. The Air Force and Army Y2K homepages did not contain sites for lessons learned.

Status of Defense-Wide Systems. Several systems provide for transmitting or processing information on a Defense-wide basis. The systems include the Defense Message System, the Global Command and Control System, the Defense Information Infrastructure Common Operating Environment, and the Defense Megacenters. Renovation and testing of the systems is critical because they connect with many DoD Component systems that cannot be certified as Y2K-compliant until their interfaces are fully tested.

The Defense Information Systems Agency homepage lists the systems mentioned above as "core mission areas," but it contains limited information on the current certification status of the systems. The Defense Information Systems Agency Y2K homepage contains a link to a site that lists the status of the Defense Megacenters, but it has not been updated since 1996. The homepage contains no reference to the other three core mission areas.

The only other information that we found on the status of Y2K certification for the systems of the core mission areas was on the Joint Interoperability Test Command Y2K homepage. The Joint Interoperability Test Command Y2K homepage connects to a site, "Y2K Test Results," which states that the results of the Y2K testing are coordinated off-line for five systems, including the Global Command and Control System and the Defense Message System.

Commercial Off-the-Shelf Products. Multiple sites provide compliance information on commercial off-the-shelf products; however, the information may not be valid. The various DoD Component homepages generally lead the user to a page that lists vendor-supplied claims of compliance information for commercial off-the-shelf products. Some of the sites also provide warnings regarding the accuracy of the compliance information. For example, the Y2K compliance status list maintained by the Government Information Technology Executive Council states:

> While striving for accuracy and timeliness, GITEC [Government Information Technology Executive Council] cannot guarantee accuracy nor indemnify users from actions related to the use of this data.

The commercial off-the-shelf information provided by the MITRE Corporation comes with the following warning:

> Much of the information on century compliance is still incomplete and unverified ... Neither the MITRE Corporation, nor the Federal Government, makes any endorsements, guarantees or warranties as to the accuracy or completeness of, or results to be obtained from, accessing and using this MITRE Corporation information, or for any damages resulting therefrom.

The current process of distributing Y2K compliance data for commercial off-the-shelf products presents two potential problems for DoD. First, the information being distributed may be of limited value because it is incomplete, and second, it may be used improperly to certify mission-critical systems as being Y2K compliant.

Validity of Vendor Supplied Data. Because vendor claims on the compliance of commercial off-the-shelf products can be incomplete or erroneous, the information may have little real value to system management and technical staff. A more useful method would be to cross-reference the vendor claim to DoD user experiences with the product, creating a comprehensive repository of lessons learned on specific products. That method would allow individuals needing information about a specific product to benefit from the experience of others as well as to provide a place to submit information on pitfalls that others could avoid. However, we did not find this type of information available during our Internet search.

Certification Process. The validity of vendor-supplied data is important because the certification process in the Management Plan allows system managers to self-certify their information technology systems based on vendor claims of compliance without independent testing. An in-depth analysis of the Y2K certification process will be presented in a separate Inspector General, DoD, report.

Year 2000 Testing Facilities. A list of facilities with Y2K testing capabilities that could assist a systems manager in determining how or where a system could be tested for Y2K compliance is not available on the Internet. According to its homepage, the Joint Interoperability Test Command, Fort Huachuca, Arizona, is the only Defense Information Systems Agency-approved, full-service Y2K tester. While there are Y2K information links from the Defense Information Systems Agency Y2K homepage to the Army Technology Integration Center, the Air Force Systems Support Group, and the Air Force Software Technology Support Center, none of those organizations are specifically designated as a Y2K testing facility. We did not find any direct links to a Navy Y2K test facility.

Need for Centralized Compilation of Year 2000 Testing Information

Although the DoD Components have made progress, the process for resolving the Y2K problem is not fully effective. Until information technology systems are adequately tested, DoD management cannot be assured that mission-critical systems will continue to operate properly into the next century. Reliable and relevant testing information on commercial, Government, and mission-unique systems needs to be well organized and made readily available to the DoD Components.

Sharing Year 2000 Testing Information. The DoD has not effectively used the Internet, a potentially invaluable resource for Y2K-related information, to

9

disseminate Y2K testing information in an organized or coordinated manner. To obtain Y2K information, users may expend vast amounts of time searching through a loosely organized array of links to sites that may contain data ranging from useful to outdated or that loop back to the original location.   Additionally, the user may arrive at identical sites from different starting points, resulting in the loss of valuable time.

Finding reliable information on corporate information technology systems, Y2K test facilities, best practices, lessons learned, or compliance of common computer software and hardware products is unnecessarily difficult. In the short time remaining to repair or replace DoD mission-critical systems before the beginning of the next century, users should not have to sift through hundreds of references to find the information they need to certify their information technology systems as Y2K compliant. The time factor will become more critical as the turn of the century approaches and system managers find themselves needing emergency assistance either to fix system failures or to keep the systems from imminent failure.

Single Source of Information. The ability of most information technology systems to operate correctly into the next century cannot be reliably determined without comprehensive testing. The DoD does not have a single facility designated to provide system managers and technical personnel with the most current and accurate Y2K information and technical assistance on testing requirements, facilities, tools, best practices, lessons learned, or results. Such a facility could also provide hotline services to answer questions or to coordinate requests for emergency assistance. Further, the facility could also be used to gather and disseminate post-Y2K related information.

Recommendations, Management Comments, and Audit Response

Added Recommendations. As a result of management comments, we added Recommendations 2. and 3. to clarify the actions needed to sufficiently identify and publicize sources of Y2K testing information for the DoD Components. We renumbered the original recommendations accordingly.

1. We recommend that the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) establish a DOD-sponsored year 2000 testing information center within DoD. The center should be responsible for:

a. Gathering, analyzing, storing, and disseminating reliable and relevant year 2000 testing information.

b. Providing year 2000 hotline services to DoD Components.

Management Comments. The Office of the Assistant Secretary of Defense (Command, Control, Communication, and Intelligence) concurred with the recommendation, stating that the office had already directed the Joint

Interoperability Test Command within the Defense Information Systems Agency to maintain a homepage that addresses Y2K testing information for all of DoD. The homepage contains test methods, vendor-provided data, lessons learned, and links to Y2K tools and other Y2K homepages. The Joint Interoperability Test Command does not have a formal hotline service; however, it does have a list of points of contact. See Part I for a summary of management comments and Part III for the complete text of the comments.

Audit Response. Although we consider management comments to be responsive to the draft recommendations, our intent was to establish a DOD-sponsored Y2K testing information center, recognized by the other DoD Components, to organize and provide links to the Y2K testing information provided on the internet by the DoD Components. As the number of systems being tested increases, the accessibility of Y2K testing information becomes more critical. We believe there is confusion on where to obtain Y2K testing information. For example, an individual from the Marine Corps requested information from the Office of the Inspector General, DoD, on how to test its computers for Y2K compliance.

2. We recommend that the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) formally notify the **DoD** Components that:

    a. The Joint Interoperability Test Command is the DOD-sponsored year 2000 testing information center.

    b. The Joint Interoperability Test Command is responsible for fielding questions and providing information on year 2000 testing.

    c. **DoD** Components should provide year 2000 testing information, internet sites, or both, on best practices, lessons learned, compliance of the Defense-wide systems, commercial off-the-shelf products, and year 2000 testing facilities, to the Joint Interoperability Test Command.

3. We recommend that the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) establish links on the internet from high-level **DoD** homepages that allow **DoD** personnel searching for year 2000 testing information to quickly and easily obtain the information gathered by the Joint Interoperability Test Command.

Management Comments Required. We added Recommendations 2. and 3. to clarify the intent of our draft recommendation. We request that the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) provide comments on the added recommendations by April 10, 1998.

11

Part II - Additional Information

Appendix A. Audit Process

Scope

This is one of a series of reports being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the year 2000 computing challenge. For a listing of audit projects addressing this issue, see the Y2K webpage on IGNET (http://www.ignet.gov/).

We reviewed and evaluated the DoD Year 2000 Management Plan issued by the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) in April 1997. In addition, we determined the extent to which DoD Components used the Internet to share Y2K-related information as of October 1997. We reviewed Y2K-related information on the DefenseLINK homepage and performed a search using Y2K key words. We also performed a general search of the Internet using Y2K key words. We reviewed the Y2K-related information provided on the Y2K homepages for the Defense Information Systems Agency, the Joint Interoperability Test Command, the Air Force, the Army, and the Navy and reviewed the various connecting links to Y2K sites. Specifically, we determined the accessibility of the Y2K-related information and the availability of:

- information on the best practices and lessons learned regarding testing of systems and software;

- information on the Defense Message System, the Global Command and Control System, the Defense Information Infrastructure Common Operating Environment, and the Defense Megacenters;

- Y2K compliance information on commercial off-the-shelf products; and

- information on Y2K testing facilities.

Methodology

Use of Computer-Processed Data. No computer-processed data were used during the audit.

Audit Type, Dates, and Standards. We performed this program audit from October to November 1997 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD.

Contacts During the Audit. We visited or contacted individuals and organizations within the DoD. Further details are available on request.

Management Control Program. We did not review the management control program in depth because the DoD has already reported the Y2K problem as a material control weakness. The finding in this report does relate to a specific management control weakness; however, separate reporting of that weakness would be unnecessary.

Appendix B. Prior Coverage and Related Publications

General Accounting Office

The General Accounting Office has conducted several audits related to Y2K issues. The audits are summarized below.

General Accounting Office Report No. AIMD-98-35 (OSD Case No. 1484), "Defense Computers: Air Force Needs to Strengthen Year 2000 Oversight," January 16, 1998. Congress requested the review of the Air Force Y2K program. The review focused on Air Force oversight of its Y2K program and the appropriateness of its strategy and actions for ensuring that the Air Force will successfully address the Y2K problem. The Air Force has taken a number of positive actions toward fulfilling its Y2K oversight responsibilities. At the same time, the Air Force had not yet adequately addressed several critical issues that would ensure that it is well-positioned to deal with the later, and more difficult, phases of Y2K correction. The review showed that some Air Force components are not adequately planning for the testing phase of their Y2K effort and developing contingency plans. Some Air Force components are also taking conflicting approaches toward determining the actual impact of the program status to their system interfaces. If the Air Force does not promptly address and take consistent action on those issues, it may well negate any success it may have in making its systems Y2K compliant. While the Air Force has enlisted the help of the Air Force Audit Agency to address some of those concerns, the Air Force must continue its comprehensive oversight to ensure that it can address unforeseen problems and delays in the next, more difficult phase.

General Accounting Office Correspondence Report No. AIMD-98-7R (OSD Case No. 1471), "Defense Computers: Technical Support Is Key to Naval Supply Year 2000 Success," October 21, 1997. The report states that Naval Supply Systems Command had not allocated sufficient resources to the Fleet Material Support Office Year 2000 Project Office to ensure that all systems interfaces were identified and adequately monitored for progress. Also, Naval Supply Systems Command had not directed that risk assessments be performed or that contingency plans be prepared at the system and functional levels. As a result of the concerns that the General Accounting Office raised, Naval Supply Systems Command and Fleet Material Support Office officials have begun addressing system interface issues by assigning full-time staff to identify date-related data elements in interface files and to ensure that date formats are compatible. The actions, together with Naval Supply Systems Command's plans for requiring systems managers to perform risk assessments and develop contingency plans for critical systems, should help mitigate the loss of operational capability at the year 2000. As Naval Supply Systems Command progresses to the renovation, validation (testing), and implementation phases of

the Y2K program, it must pay continued attention to those issues to better ensure that the year 2000 challenge is met. The Director, Test, Systems Engineering and Evaluation, concurred with a draft of this report,

General Accounting Office Report No. AIMD-97-149 (OSD Case No. 1446), "Defense Computers: Logistics Systems Support Center Needs to Confront Significant Year 2000 Issues," September 26, 1997. The report states that while Y2K improvement efforts have been initiated by the Logistics Systems Support Center on its Commodity Command Standard System program, the Logistics Systems Support Center has not completed several key project management actions associated with the assessment phase. As a result, the Logistics Systems Support Center is not presently well-positioned to move to the more difficult phases of renovation, validation, and implementation in the Y2K process phases that industry experts estimate could consume as much as three-fourths of Y2K project time and resources. The report recommends that the Logistics Systems Support Center still needs to take a number of actions to increase its chances of success, including managing competing workload priorities, planning for testing, clarifying and coordinating written systems interface agreements, and developing a contingency plan. To increase its chances of successfully managing its Y2K program, the Logistics Systems Support Center will also need to institutionalize a repeatable software change process that can be used from project to project. Given the prominence of date processing in the Commodity Command Standard System and its central mission of sustaining the solider in the field, the Logistics Systems Support Center cannot delay any longer, and must demonstrate that it will perform all the key actions associated with sound Y2K planning and management. The Director, Test, Systems Engineering and Evaluation, concurred with a draft of the report.

General Accounting Office Correspondence Report No. AIMD-97-120R (OSD Case No. 1399), "Defense Computers: Standard Systems Group Needs to Sustain Year 2000 Progress," August 19, 1997. The report states that the Standard Systems Group must further emphasize management and oversight of systems interfaces to ensure successful implementation of Y2K-compliant systems throughout its user community. Also, a number of Standard Systems Group systems must use standard interface message formats to exchange data that are defined by external entities outside the control of the Standard Systems Group. Some of the message formats had not been finalized by the organizations responsible for their definition. Recently, officials from the Standard Systems Group's Year 2000 Project Office began addressing the interface issue. If effectively implemented by the project office, the effort should be a positive step toward preventing loss of operational capabilities between the Standard Systems Group's internal and external systems' interface message formats at the year 2000. The Air Force Director, Communications and Information, concurred with a draft of the report.

General Accounting Office Report No. AIMD-97-112 (OSD Case No. 1395), "Defense Computers: Improvements to DoD Systems Inventory Needed for Year 2000 Effort," August 13, 1997. The report states that while improvement efforts have been initiated, the Defense Integration Support Tools database will not be usable and reliable in time to have a beneficial impact on Y2K correction efforts. The Defense Integration Support Tools contains the

DoD-wide inventory of automated information systems. The report recommended investigation of all duplicate, inactive, and incomplete entries; expedited development and implementation of the purging methodology; and expansion of information contained in the database for individual systems to include key program activity schedules that managers of interfacing systems need to ensure that their systems' interfaces are maintained during the renovation phase. The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) concurred with the recommendations and stated that DoD plans to take corrective action by performing statistical sampling of the Defense Integration Support Tools database to validate accuracy.

General Accounting Office Report No. AIMD-97-106 (OSD Case No. 1389), "Defense Computers: Issues Confronting Defense Logistics Agency in Addressing Year 2000 Problems," August 12, 1997. The report states that the Defense Logistics Agency had already assessed the Y2K impact on its operations; inventoried its systems; conducted pilot projects to determine Y2K effects on some of its major systems; and developed and issued policies, guidelines, standards, and recommendations on Y2K correction for the agency. The Defense Logistics Agency had not prioritized the 86 automated information systems that it plans to have operational in the year 2000 to ensure that mission-critical systems are corrected first. In addition, the Defense Logistics Agency had not developed contingency plans in the event that any of the systems cannot be corrected on time. The report recommended that the Defense Logistics Agency complete signed, written interface agreements detailing data exchange methods; develop a Y2K systems prioritization plan; and prepare contingency plans for all critical systems. The Under Secretary of Defense for Acquisition and Technology concurred with the recommendation on interface agreements and contingency plans but did not concur with the recommendation on systems prioritization, stating that the Defense Logistics Agency planning efforts and strategy for renovating its systems are adequate. The Defense Logistics Agency is in the process of ensuring that documented agreements are prepared for all interfaces requiring changes between their interface partners. Completion was expected in September 1997. The Defense Logistics Agency is also in the process of preparing contingency plans within each business area focusing on those systems that Y2K will affect. Initial plans were to be prepared by October 1997.

General Accounting Office Report No. AIMD-97-117 (OSD Case No. 1392), "Defense Computers: Defense Finance and Accounting Service Faces Challenges in Solving the Y2K Problems," August 11, 1997. The report states that the Defense Finance and Accounting Service had developed a Y2K strategy consistent with the DoD Y2K Management Plan and has defined conditions that automated information systems must meet to obtain certification as Y2K compliant. However, the Defense Finance and Accounting Service had not identified all critical tasks for achieving Y2K objectives, established milestones for completing all tasks, performed formal risk assessments of all systems to be renovated, or prepared contingency plans in the event that renovations are not completed in time or fail to operate properly. The report also states that the Defense Finance and Accounting Service had not identified all system interfaces and had completed only 230 of 904 written agreements

with interface partners. Further, the Defense Finance and Accounting Service had not adequately ensured that testing resources will be available to determine whether all operational systems are compliant before the year 2000. The report recommended that the Defense Finance and Accounting Service identify Y2K program actions and milestones, issue guidance to ensure continuity of operations, identify external interfaces and obtain written agreements describing the method of data exchange, and devise a testing schedule to ensure that all systems can operate in a Y2K environment. The Under Secretary of Defense (Comptroller) concurred with the recommendations. The Defense Finance and Accounting Service agreed to update its existing Year 2000 Executive Plan and its Corporate Contingency Plan. It also agreed to have all written interface agreements with interface partners in place by September 30, 1997, and to fully implement its certification process for ensuring that all systems are Y2K compliant. Further, the Defense Finance and Accounting Service agreed to devise a testing schedule that identifies the test facilities and resources needed for performing proper testing of its systems in a Y2K environment.

General Accounting Office Publications. Among the publications that the General Accounting Office issued relating to the Y2K problem are the "Year 2000 Computing Crisis: An Assessment Guide," Exposure Draft (GAO/AIMD-10.1.14), February 1997; and the "Year 2000 Computing Crisis: Audit Program Guide, " Exposure Draft (GAO/AIMD-10.1.17), June 1997. The assessment guide provides a framework and a checklist for assessing the readiness of Federal agencies to achieve Y2K compliance. The assessment guide provides information on the scope of the challenge and offers a structured approach for reviewing the adequacy of agency planning and management of the Y2K program. The audit program guide provides information technology system auditors with more detailed guidelines to use in reviewing individual agency efforts in solving Y2K issues.

Inspector General, DoD

Inspector General, DoD, Report No. 98-065, "DoD Information Technology Solicitations and Contract Compliance for Year 2000 Requirements," February 6, 1998. The review focuses on the compliance of DoD information technology solicitations and contracts with Federal Acquisition Regulation section 39.106, "Y2K Compliance." The report states that 20 of the reviewed 35 indefinite-delivery/indefinite-quantity and indefinite-delivery-requirement information technology contracts (for commercial off-the-shelf products) did not have the required Federal Acquisition Regulation Y2K compliance language, and none of the 35 contracts required testing of purchased products. As a result, DoD has no assurance that information technology products purchased were Y2K compliant. Further, the purchase of noncompliant products may seriously hamper the ability of DoD to perform its administrative and warfighting mission requirements. Additionally, because 33 of the 35 contracts are available for use by other Federal agencies, nonconforming contract items could negatively affect the ability of the Federal Government to survive the Y2K crisis. After the audit results briefing, the Acting Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) and the

Director, Defense Procurement, drafted new guidance for the DoD Components that would require Y2K-compliant information technology and testing of items purchased from the information technology contracts. The guidance was later signed by the Acting Assistant Secretary of Defense (Command, Control, Communications, and Intelligence). In addition, Army, Navy, and Air Force contracting officers completed the contract modifications to include the required Federal Acquisition Regulation Y2K language in 17 additional contracts. Three other Air Force contracts are being reviewed.

Appendix C. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
   Deputy Under Secretary of Defense (Acquisition Reform)
   Deputy Under Secretary of Defense (Logistics)
   Director, Defense Procurement
   Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense (Comptroller)
Under Secretary of Defense for Personnel and Readiness
Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)
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Assistant Secretary of the Air Force (Financial Management and Comptroller)
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Director, Defense Contract Audit Agency
   Chief Information Officer, Defense Contract Audit Agency
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Nqn-Defense Federal Organizations and Individuals

Chief Information Officer, General Services Administration
Office of Management and Budget
    Office of Information and Regulatory Affairs
Technical Information Center, National Security and International Affairs Division,
    General Accounting Office
Director, Defense Information and Financial Management Systems, Accounting and
    Information Management Division, General Accounting Office

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    Senate Subcommittee on Defense, Committee on Appropriations
    Senate Committee on Armed Services
    Senate Committee on Governmental Affairs
    House Committee on Appropriations
    House Subcommittee on National Security, Committee on Appropriations
    House Committee on Government Reform and Oversight
    House Subcommittee on Government Management, Information, and Technology,
        Committee on Government Reform and Oversight
    House Subcommittee on National Security, International Affairs, and Criminal Justice,
        Committee on Government Reform and Oversight
    House Committee on National Security

Part III - Management Comments

Office of the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) Comments

ASSISTANT SECRETARY OF DEFENSE
6000 DEFENSE PENTAGON
WASHINGTON. DC **20301-6000**

January 12, 1998

COMMAND, CONTROL,
COMMUNICATIONS, AND
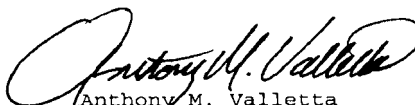INTELLIGENCE

MEMORANDUM FOR INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE

SUBJECT: Response to OIG, DoD, Draft Audit Report, "Sharing Year
           2000 Testing Information on DoD Information Technology
           Systems," Project No. 8AS-0004, November 26, 1997

       Thank you for the opportunity to review and comment on your
November 26, 1997, draft audit report, subject as above.   While
we concur with your recommendation that one organization should
provide reliable and relevant Year 2000 testing information for
the Department, the Joint Interoperability Test Command (JITC,
within the Defense Information Systems Agency (DISA) has been
given this responsibility and has already established a homepage
on the internet.

       We appreciate the opportunity to comment on this draft
report and request that you incorporate this memorandum along
with the attachment in the final audit report.

                                        Anthony M. Valletta
                                        (Acting)

Attachment

Final Report
Reference

Response to Office of the Inspector General (OIG), DoD Draft
Audit Report "Sharing Year 2000 Testing Information on DoD
Information Technology Systems,* Project No. 8AS-0004,
November 26, 1997

<u>Recommendation</u>:   The DoDIG recommends that the Chief Information
Officer establish a DoD sponsored year 2000 testing information
center within the DoD responsible for:

    1.   Gathering, analyzing, storing, and disseminating
       reliable and relevant year 2000 testing information.
    2.   Providing year 2000 hotline services to DOD Components.

<u>Response</u>:   Concur with comment.   The Acting ASD(C3I) has already
directed the Joint Interoperability Test Command (JITC) within
the Defense Information Systems Agency (DISA) to be the focal
point for this and maintain a homepage that addresses Year 2000
testing information for all of DoD.   This homepage, located at
www.disa.mil/cio/y2k/jitc2000.html, contains topics such as test
methods, vendor provided data, links to Y2K tools, and lessons
learned.   It also contains links to other Y2K homepages, such as
the Social Security Administration Year 2000 COTS Data Base.
Although JITC has not instituted a formal hotline service, it
does have a list of points of contact and will assist users who
call or e-mail them.

Renumbered
as Recom-
mendations
1.a. and 1.b.

Audit Team Members

The Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD, produced this report.

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